

REMARKS

Summary

Claims 1-29 are pending in the application. Claims 1, 2, 5-21, 23-26 and 29 were rejected in the present Office Action. Claims 3, 4, 22, 27 and 28 were objected to as being dependent upon a rejected claim. Claims 1, 21, 26 and 28 have been amended and claims 2, 3, 22 and 27 have been canceled. Claims 30-46 have been added. No new matter has been added as a result of this amendment.

Allowable Subject Matter

The Applicant respectfully appreciates that the Examiner submitted that claims 3, 4, 22, 27 and 28 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten independent form including all of the limitation of the base claim and any intervening claims.

Claim 1 has been amended to incorporate all elements of claims 2 and 3. Claim 21 has been amended to incorporate all elements of claim 22. Claim 26 has been amended to incorporate all elements of claim 27. In addition, claim 28 has been amended to be dependent on claim 26

Therefore, independent claims 1, 21 and 26 and dependent claims 5-20, 23-25 and 28-29 are allowable.

Claim Rejections

Claims 1 and 20 under 35U.S.C. §102(b)

Claims 1 and 20 were rejected under 35 U.S.C. §102(b) as being anticipated by Segawa et al (6,342,818). However, the Applicant respectfully submits that the amendment overcomes the rejection.

Independent claim 1 has been amended according to the Examiner's suggestion regarding the objection above described. Claim 1 has been amended to incorporate the elements of claims 1 and 2. Claim 20, being a claim dependent on an allowable claim is without more, allowable.

Claims 21, 23, 25, 26 and 29 under 35U.S.C. §103(a)

Claims 21, 23, 25, 26 and 29 were rejected under 35 U.S.C. §103(a) as being unpatentable over Vandegraaf et al (4,347,484). However, the Applicant respectfully submits that the above amendment overcomes the rejection.

Independent claim 21 has been amended according to Examiner's suggestion regarding the objection above described. Claim 21 has been amended to incorporate the elements of claim 22. Claims 23 and 25, being a claim dependent on an allowable claim are without more, allowable.

Independent claim 26 also has been amended according to Examiner's suggestion regarding the objection above described. Claim 26 has been amended to incorporate the elements of claim 27. Claims 28 and 29, being a claim dependent on an allowable claim are without more, allowable.

Claim 24 under 35U.S.C. §103(a)

Claim 24 was rejected under 35 U.S.C. §103(a) as being unpatentable over Vandegraaf et al (4,347,484) in view of Norimatsu(5,173,665) as applied to calims 21,23, 25 and 26 above. However, claim 24 is a dependent claim on claim 21 which has been amended according to the Examiner's suggestion. Therefore, claim 28 are allowable without more.

Claims 1, 5-8, 10-12, 14-18 and 20 under 35U.S.C. §103(a)

Claims 1, 5-8, 10-12, 14-18 and 20 were rejected under 35 U.S.C. §103(a) as being unpatentable over Vandergraaf et al(4,347,484) in view of Segawa. However, Claim1 has been amended according to the Examiner's suggestion described above.

And also, claims 1, 5-8, 10-12, 14-18 and 20 are dependent on claim 1. Therefore, claims 1, 5-8, 10-12, 14-18 and 20 are allowable without more.

Claim 2 under 35U.S.C. §103(a)

Claim 2 has been canceled.

Claim 9 under 35U.S.C. §103(a)

Claim 9 was rejected under 35 U.S.C. §103(a) as being unpatentable over Vandegraaf and Segawa as applied to claims 1, 5-8, 10-12, 14-18 and 20 above, and further in view of Brunn et al(6,650,195). However, claim 9 is dependent on claim 1 which has been amended according to the Examiner's suggestion. Therefore, claim 9 is allowable without more.

Claims 13 and 19 under 35U.S.C. §103(a)

Claim 13 and 19 were rejected under 35 U.S.C. §103(a) as being unpatentable over Vandegraaf and Segawa as applied to claims 1, 5-8, 10-12 and 14-18 above, and further in view of Norimatsu (5,173,665). However, claims 13 and 19 are dependent on claim 1 which has been amended according to the Examiner's suggestion. Therefore, claims 13 and 19 are allowable without more.

New Claims

The Applicant has added new claims 30-46.

New claim 30 has been made according to the Examiner's suggestion regarding the objection above described. Claim 30 has been made to incorporate the elements of claims 1, 2 and 4.

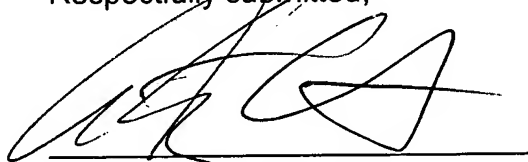
Furthermore, each element of new dependent claims 31-46 corresponds to each element of original claims 5-20.

For at least these reason, new claims 30-46 are allowable.

Conclusion

In view of the amendments and arguments above, Applicant respectfully submits that pending claims 1, 5-21, 23-26 and 28-29 and new claims 30-46 are in condition for allowance and seek an early allowance thereof. If for any reason the Examiner is unable to allow the application in the next Office Action and believes that a telephone interview would be helpful to resolve any remaining issues, he is respectfully requested to contact the undersigned attorney.

Respectfully submitted,

A handwritten signature in black ink, appearing to be 'APC', written over a horizontal line.

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